



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|------------------------------|------------------------|
| 10/802,939 | 03/18/2004 | Masashi Murakami | 2004_0440A | 5151 |
| 513 7590 08/30/2007 WENDEROTH, LIND & PONACK, L.L.P. 2033 K STREET N. W. SUITE 800 WASHINGTON, DC 20006-1021 | | | EXAMINER HANNETT, JAMES M | |
| | | | ART UNIT 2622 | PAPER NUMBER |
| | | | MAIL DATE 08/30/2007 | DELIVERY MODE PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/802,939 | Applicant(s) MURAKAMI, MASASHI | |
| | Examiner James M. Hannett | Art Unit 2622 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-8 and 10 is/are allowed.
- 6) ☒ Claim(s) 1,2,9 and 11 is/are rejected.
- 7) ☒ Claim(s) 3 and 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/18/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>6/17/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 6/17/2004 has been considered by the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

- 1: Claims 1, 2, 9 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by USPN 2007/0115379 A1 Endo et al.
- 2: As for Claim 1, Endo et al depicts in Figure (3 and 4) and teaches on Paragraphs 0095-0097] and on Paragraph [0015-0018] An image sensor comprising a shift register (SR1), formed by a dynamic logic circuit, for sequentially selecting a row of the two-dimensional imaging unit (101), wherein the shift register (102) includes a plurality of stages of unit registers (G1-G3), each holding a signal (multiple-phase shift register) see timing diagram on Figure 4, a plurality of first reset circuits (circuit that sets G1 to 0) and a plurality of second reset circuits (circuit that sets G2 to 0)), the first reset circuits correspond to the unit registers (registers connected to phase G1), and each of the first reset circuits resets an input signal of a back unit register when the unit register corresponding to the first reset circuit outputs a high level signal. Endo et al depicts in Figure 4 that the three phases connected to signal lines (G1-G3) are out of phase and that when

Art Unit: 2622

phase G2 is on, Phases G1 and G3 are off. Therefore, Endo et al teaches said back unit register (prior register in the series G1) being arranged in back of the corresponding unit register (G2) in shifting direction, and the second reset circuits (circuit to set G2 to 0) correspond to the unit registers (G2), and each of the second reset circuits (Reset for G2) resets an input signal of a front unit register (G3) when the unit register corresponding to the second reset circuit (G2) outputs a high level signal, said front unit register being arranged in front of the corresponding unit register in shifting direction.

3: In regards to Claim 2, Endo et al depicts in Figure (3 and 4) and teaches on Paragraphs 0095-0097] and on Paragraph [0015-0018] wherein the front unit Register G3 depicted in Figure 4 is one of the unit registers which are arranged at least two stages forward of the unit register corresponding to each second reset circuit in shifting direction.

4: As for Claim 9, Claim 9 is rejected for reasons discussed related to Claim 1.

5: In regards to Claim 11, Claim 11 is rejected for reasons discussed related to Claim 1.

Allowable Subject Matter

6: Claims 5-8 and 10 are allowed.

7: Claims 3 and 4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art teaches the use of image sensors having a shift register having a plurality of stages and driven by multiple phase signals. Furthermore, the prior art teaches the use of reset circuits for resetting the different phases of the shift register to on and off states in order to allow the

Art Unit: 2622

charge to be transferred in the image sensor. However, the prior art does not teach the specifics of first and second reset circuits as claimed and does not teach the detailed resetting method.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 2003/0137594 A1 Koizumi et al teaches the use of an image sensor with a multi-phase shift register.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M. Hannett whose telephone number is 571-272-7309. The examiner can normally be reached on 8:00 am to 5:00 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on 571-272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James M. Hannett
Examiner
Art Unit 2622



JMH
August 29, 2007